

CLAIMS

- 1.- A layered panel, including a substrate (2) and one or more layers on top of said substrate, said one or more  
5 layers comprising a decorative covering layer (3), at least one of the layers on top of said substrate comprising a synthetic material, in particular a synthetic resin, extending over the whole surface of the panel, whereby said material is consolidated by pressure with one or more of  
10 the other layers and/or the substrate and wherein the panel contains at least one antistatic agent evenly distributed in said synthetic resin over the whole surface of the panel and preferably at least throughout a part of the thickness of the body of said synthetic material.
- 15 2.- A panel according to claim 1, whereby said agent is uniformly dispersed or dissolved in said material.
- 3.- A panel according to claim 1 or 2, wherein the  
20 antistatic agent is dissolved in water and whereby the obtained solution is mixed into the synthetic material.
- 4.- Panel according to any of the preceding claims, whereby said antistatic agent comprises a chemical composition of  
25 the type R-X with an hydrophobic organic radical R at one extremity of the molecule chain and with at the other extremity a chain moiety or rest comprising an element X, which rest has a limited affinity for water.
- 30 5.- Panel according to claim 4, wherein said composition is a carbonic acid salt or carbonic acid ester, the carboxylate-rest  $[-COO]_nX$  of which has a limited affinity for water.

6.- Panel according to claim 5, whereby the carbonic acid is an alkane acid with one to five C atoms.

7.- Panel according to claim 5, whereby the acid is  
5 unsaturated with one to five C atoms.

8.- Panel according to claim 6, whereby the salt is or includes potassium formiate (HCOOK) or sodium formiate (HCOONa) or a mixture of both.

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9.- Panel according to claim 1, 2 or 3, wherein said agent consists of or comprises a salt, in particular an alkali salt.

15 10.- Panel according to claim 9, wherein said alkali salt is used in combination with the composition of the type R-X.

11.- Panel according to claim 9 or 10, wherein said alkali  
20 salt is NaCl.

12.- Panel according to claim 9 or 10 wherein said alkali salt is KCl or a combination of NaCl and KCl.

25 13.- Panel according to any of the preceding claims, whereby the added quantity of said antistatic agents in the synthetic material is at least 2.5 g/m<sup>2</sup> of the covered surface.

30 14.- Panel according to any of the preceding claims, wherein the decorative covering layer (3) carries a surface layer (4), at least the latter comprising a synthetic resin and a wear resistant additive.

15.- Panel according to claim 14, wherein at least said covering layer (3) comprises a synthetic resin wherein said antistatic agents are distributed.

5 16.- Panel according to claim 14, wherein said surface layer (4) comprises a synthetic resin wherein said antistatic agents are distributed.

10 17.- Panel according to claim 14, whereby only said covering layer comprises a synthetic resin wherein said antistatic agents are distributed, whereas the surface layer, at least before its application onto the panel, is free of such agents.

15 18.- Panel according to claim 15, wherein the concentration of the antistatic agents is highest at the interface of said covering layer (3) and the surface layer (4).

20 19.- Panel according to claim 14, wherein concentrations of said antistatic agent are present in both layers and wherein the concentration of the antistatic agent is higher in said covering layer (3) than in the surface layer (4).

25 20.- Panel according to any of the preceding claims whereby the substrate (2) comprises material selected from the group of glued and pressed wood-based boards, in particular a MDF or HDF board or particle board, or extruded wood.

30 21.- Panel according to any of the preceding claims, whereby the decorative covering layer (3) is a paper layer impregnated with melamine resin optionally filled with a wear resistant additive.

22.- Panel according to claim 14, whereby said surface

layer (4) comprises a melamine or ureum resin or a mixture of both.

23.- Panel according to claim 21, whereby said antistatic  
5 agent is partially taken up in the impregnating resin for the decorative covering layer (3).

24.- Panel according to any of the preceding claims,  
comprising a substrate (2) and a decorative covering layer  
10 (3) without additional surface layer (4) on top of it and whereby wear resistant additives are incorporated at least in the outer surface of said covering layer (3), the antistatic agents being present in the body of said covering layer and optionally at its interface with the  
15 substrate (2).

25.- Panel according to any of the claims 14 to 19, in the form of a floor panel, whereby the decorative covering layer (3) is a sheet of paper, impregnated with melamine  
20 resin, which is printed with a decorative pattern, whereby the surface layer (4) comprises a transparent melamine resin and whereby the other side of the substrate (2) is covered with a resin-impregnated paper backing layer (5).

25 26.- Panel according to any of the preceding claims, whereby said antistatic agent is present in and/or on the substrate (2).

27.- Panel according to claim 25 or 26, whereby said  
30 antistatic agent also is present in the backing layer (5).

28.- Panel according to any of the preceding claims, whereby said antistatic agent is present in an additional layer (6), comprising a synthetic material, between the

substrate (2) and the covering layer (3).

29.- A method for manufacturing a layered panel according to any of the preceding claims, whereby the various layers  
5 (2-3, 2-4) are stacked as self-supporting sheets upon each other, in the right sequence, and are consolidated by means of hot-pressing, characterised in that previous to said stacking, said antistatic agent is directly dosed with the suitable quantity and mixed into the impregnating  
10 composition for any of the self-supporting sheets of the top or surface layer (4) and/or of the decorative covering layer (3), after which these impregnated sheets are dried before said stacking.

15 30.- Method according to claim 29, whereby said antistatic agent also is mixed into the impregnating composition for the sheet of the backing layer (5) and/or into an additional layer (6).

20 31.- Method according to claim 29 or 30, wherein the upper surface of the decorative layer (3) is sprayed with a solution of the antistatic agent and further covered with a surface layer (4) comprising wear resistant additives.

25 32.- Method according to claim 31, wherein the wear resistant additives are distributed in the lower part of said surface layer (4).

30 33.- Method according to claim 32, wherein said surface layer (4) is a self supporting cellulose fiber sheet impregnated with melamine and/or ureum resin having in its lower part wear resistant corundum particles distributed therein.

34.- Method for manufacturing a layered panel whereby the various layers (2-4) are stacked as self-supporting sheets upon each other, in the right sequence, and are consolidated by means of hot-pressing, characterised in  
5 that previous to said stacking, said antistatic agent is dosed with the suitable quantity in the underside of the covering layer (3) by spraying the surface of the core layer (2) with a solution of said agent.